

IN THE CLAIMS:

Please amend the claims according to the following listing, in which insertions are indicated by underline and deletions are indicated by strikethrough or double brackets. This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Previously presented) An elongate light guide having an end face on a longitudinal end thereof, an elongate emitting face extending longitudinally of the guide and an internal face extending longitudinally of the guide, the light guide emits lights incident on the end face from the emitting face in a line shape, while the lights are reflected by the internal face, wherein a sectional shape of the light guide in a direction orthogonal to the longitudinal direction of this light guide has two opposite parabolas or two oval curves, a line segment connecting the focal points of said two opposite parabolas or the focal points of said two oval curves, and a line segment corresponding to said emitting face.

2. (Previously Presented) The light guide according to Claim 1, wherein a side face of the light guide on a side of said emitting face is substantially parallel to the optical axis.

3. (Previously Presented) An image reader comprising an illuminating unit including : an elongate light guide having an end face on a longitudinal end thereof, an elongate emitting face extending longitudinally of the guide and an internal face extending longitudinally of the guide, the light guide emits lights incident on the end face from the emitting face in a line shape, while the lights are reflected by the internal face, wherein a sectional shape of the light guide in a direction orthogonal to the longitudinal direction of this light guide has two opposite parabolas or two oval curves, a line segment connecting the focal points of said two opposite parabolas or the focal points

of said two oval curves, and a line segment corresponding to said emitting face, a light source on an end face of the light guide, a lens array for converging on a light receiving element lights radiated from the illuminating unit toward a document and reflected by the document or transmitted by the document, and a box housing the illuminating unit and the lens array.

4. (Previously Presented) The image reader according to Claim 3, including two of said illuminating units, and the illuminating units are so arranged as to cause lights emitted from the emitting faces of the light guides thereof to irradiate the same area of a face of the document being illuminated.

5. (Previously Presented) An image reader comprising an illuminating unit including : an elongate light guide having an end face on a longitudinal end thereof, an elongate emitting face extending longitudinally of the guide and an internal face extending longitudinally of the guide, the light guide emits lights incident on the end face from the emitting face in a line shape, while the lights are reflected by the internal face, wherein a sectional shape of the light guide in a direction orthogonal to the longitudinal direction of this light guide has two opposite parabolas or two oval curves, a line segment connecting the focal points of said two opposite parabolas or the focal points of said two oval curves, and a line segment corresponding to said emitting face, and a light source on an end face of the light guide, a lens array for converging on a light receiving element lights radiated from the illuminating unit toward a document and reflected by the document or transmitted by the document, and a box housing the illuminating unit and the lens array, wherein a side face of the light guide on a side of said emitting face is substantially parallel to the optical axis.

6. (Previously Presented) The image reader according to Claim 5, including two of said illuminating units, and the illuminating units are so arranged as to cause lights emitted from the emitting faces of the light guides thereof to irradiate the same area of a face of the document being illuminated.

7. (Previously presented) The light guide according to claim 1, wherein the sectional shape of the light guide causes light emitted from the emitting face to be confined to a prescribed emission angle with respect to the emitting face.

8. (Previously presented) The light guide according to claim 1, wherein the said line segment connecting the focal points corresponds to a bottom face of the light guide extending longitudinally thereof, is disposed opposite to said line segment corresponding to said emitting face, and has a scattering pattern formed thereon.

9. (Previously Presented) The light guide according to claim 1, wherein said end face is adapted to receive incident light thereon from a light source.

10. (Previously Presented) The light guide according to claim 1, wherein the line segment corresponding to said emitting face of the light guide has a larger width than that of the said line segment connecting the focal points.

11. (Previously presented) An elongate light guide comprising:
an end face;

an emitting face extending longitudinally of the guide and which emits light in a line shape;
and

an internal face;

wherein:

the light guide emits light incident on the end face from the emitting face while the light is reflected by the internal face;

the light emitted from the emitting face is confined to a prescribed emission angle with respect to the emitting face;

a sectional shape of the light guide in a direction orthogonal to the longitudinal direction of this light guide has two opposite parabolas or two oval curves, a line segment connecting the focal points of said two opposite parabolas or the focal points of said two oval curves, and a line segment corresponding to said emitting face; and

said line segment connecting the focal points is disposed opposite to said line segment corresponding to said emitting face and has a scattering pattern formed thereon.

12. (Previously Presented) The light guide according to Claim 11, wherein a side face of the light guide on a side of said emitting face is substantially parallel to an optical axis of the light guide.

13. (Previously Presented) The light guide according to claim 11, wherein said end face is adapted to receive incident light thereon from a light source.

14. (Previously Presented) The light guide according to claim 11, wherein the line segment corresponding to said emitting face of the light guide has a larger width than that of the said line segment connecting the focal points.

15. (Previously Presented) An elongate light guide comprising:

an end face;

an emitting face extending longitudinally of the guide and which emits light in a line shape;

and

an internal face;

wherein:

said end face is adapted to receive incident light thereon from a light source;

the light guide emits the light incident on the end face from the emitting face while the light is reflected by the internal face; and

a sectional shape of the light guide in a direction orthogonal to the longitudinal direction of this light guide has two opposite parabolas or two oval curves, a line segment connecting the focal points of said two opposite parabolas or the focal points of said two oval curves, and a line segment corresponding to said emitting face.

16. (Previously Presented) The light guide according to claim 15, wherein the line segment corresponding to said emitting face of the light guide has a larger width than that of the said line segment connecting the focal points.

17. (Previously Presented) The light guide according to claim 15, wherein the said line segment connecting the focal points corresponds to a bottom face of the light guide extending longitudinally thereof, is disposed opposite to said line segment corresponding to said emitting face, and has a scattering pattern formed thereon.